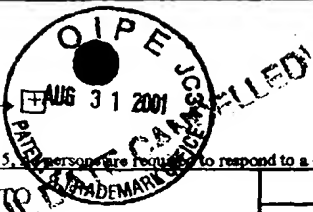


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# Substitute for form 1449A/PTO **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

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Sheet 1 of 12

Complete if Known	
Application Number	09/866,067
Filing Date	May 23, 2001
First Named Inventor	Mcade et al.
Group Art Unit	Not Yet Assigned 1634
Examiner Name	Not Yet Assigned S. Z. Zomer
Attorney Docket Number	A-58762-20/RFT/RMS/RMK

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## **U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
SE	1	4,704,193		Bowers et al.	11/1987	
	2	4,707,352		Stavrianopoulos	11/1987	
	3	4,707,440		Stavrianopoulos	11/1987	
	4	4,711,955		Ward et al.	12/1987	
	5	4,755,458		Rabbani et al.	7/1988	
	6	4,787,963		MacConnell	11/1998	
	7	4,840,893		Hill et al.	6/1989	
	8	4,849,513		Smith et al.	7/1989	
	9	4,868,103		Stavrianopoulos et al.	9/1989	
	10	4,894,325		Englehardt et al.	1/1990	
	11	4,943,523		Stavrianopoulos	7/1990	
	12	4,945,045		Forrest et al.	07/1990	
	13	4,952,685		Stavrianopoulos	8/1990	
	14	4,994,373		Stavrianopoulos	2/1991	
	15	5,002,885		Stavrianopoulos	3/1991	
	16	5,013,831		Stavrianopoulos	5/1991	
	17	5,082,830		Brakel et al.	1/1992	

## **FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>3</sup>
		Office <sup>4</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
SE	18	EP	0 234 938	A2	Cranfield Inst. of Tech.	2/1987		
	19	EP	0 229 943	B1	Molecular Biosystems Inc.	7/1987		
	20	EP	0 599 337	A2	Canon Kabushiki Kaisha	1/1994		
	21	EP	0 063 879	A2	Yale University	11/1982		
	22	EP	0 515 615		Boehringer Mannheim	9/1996		
	23	CA	2 090 904	A1	F. Hoffman-La Roche	9/1993		
	24	JP	238,166	A	Mitsubishi Corp.	1988	abstract	
	25	JP	6-41183	A2	Mitsubishi Corp.	1994		

Examiner Signature	S. Z. Zomer	Date Considered	5-17-03
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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 12

Complete if Known	
Application Number	09/866,067
Filing Date	May 23, 2001
First Named Inventor	Meade et al.
Group Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	A-58762-20/RFT/RMS/RMK

## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	26	5,089,112		Skotheim et al.	02/1992	
	27	5,175,269		Stavrianopoulos	12/1992	
	28	5,180,968		Bruckenstein et al.	01/1993	
	29	5,241,060		Englehardt et al.	8/1993	
	30	5,242,828		bergstrom et al.	09/1993	
	31	5,278,043		Bannwarth et al.	1/1995	
	32	5,312,527		Mikkelsen et al.	5/1994	
	33	5,328,824		Ward et al.	7/1994	
	34	5,356,786		Heller et al.	10/1994	
	35	5,391,272		O'Daly et al.	02/1995	
	36	5,403,451		Riviello et al.	4/1995	
	37	5,436,161		Bergstrom et al.	07/1995	
	38	5,443,701		Willner et al.	08/1995	
	39	5,449,767		Ward et al.	9/1995	
	40	5,472,881		Beebe et al.	12/1995	
	41	5,476,928		Ward et al.	12/1995	
	42	5,552,270		Khrapko et al.	9/1996	

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>3</sup>
		Office <sup>4</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
	43	WO	86/05815	A1	Genentics International Inc.	03/1985		
	44	WO	90/05732	A1	Columbia Univ.	5/1990		
	45	WO	92/10757	A1	Boehringer Mannheim	6/1992		
	46	WO	93/22678	A2	Mass Inst. of Tech.	11/1993		
	47	WO	93/10267	A1	IGEN, Inc.	5/1993		
	48	WO	94/22889	A1	Cis Bio International	10/1994		
	49	WO	95/15971	A2	Calif. Inst. of Technology	6/1995		
	50	WO	96/40712	A1	Calif. Inst. of Technology	12/1996		

Examiner Signature	S. Ziemer	Date Considered	5-17-03
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Indicate many sheets as necessary) SEP 04 2001 U.S. PATENT & TRADEMARK OFFICE		Application Number	09/866,067
		Filing Date	May 23, 2001
		First Named Inventor	Meade et al.
		Group Art Unit	Not Yet Assigned
		Examiner Name	Not Yet Assigned
Sheet 3	of 12	Attorney Docket Number	A-58762-20/RFT/RMS/RMK

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U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
SE	51	5,565,552		Magda et al.	10/1996	
	52	5,571,568		Ribi et al.	11/1996	
	53	5,573,906		Bannwarth et al.	11/1996	
	54	5,591,578		Meade et al.	1/1997	
	55	5,595,908		Fawcett et al.	1/1997	
	56	5,601,982		Sargent et al.	2/1997	
	57	5,620,850		Barndad et al.	4/1997	
	58	5,632,957		Heller et al.	05/1997	
	59	5,700,667		Marble et al.	12/1997	
	60	5,705,348		Meade et al.	1/1998	
	61	5,741,700		Ershov et al.	4/1998	
	62	5,756,050		Ershov et al.	5/1998	
	63	5,770,369		Meade et al.	6/1998	
	64	5,770,721		Ershov et al.	6/1998	
	65	5,776,672		Hashimoto et al.	7/1998	
	66	5,780,234		Meade et al.	7/1998	
	67	5,795,453		Gilmartin et al.	08/1998	

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>3</sup>
		Office <sup>2</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
SE	68	WO	97/01646	A2	Univ. of N. Carolina	1/1997		
	69	WO	97/31256	A3	Cornell Res. Foundation	08/1997		
	70	WO	97/44651	A1	AU Membrane and	11/1997		
	71	WO	97/27329	A1	Univ. of Chicago	7/1997		
	72	WO	97/41425	A1	Univ. of Alberta	11/1997		
	73	WO	98/20162	A2	Clinical Micro Systems	5/1998		
	74	WO	98/27229	A1	Univ. of Chicago	6/1998		
	75	WO	98/28444	A2	Univ. of Chicago	7/1998		
	76	WO	98/35232	A2	Univ. of N. Carolina	8/1998		
	77	WO	98/51823	A1	Mosaic Technology	11/1998		

Examiner Signature	S. Zomer	Date Considered	5-17-03
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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

SEP 04 2001

(use as many sheets as necessary)

Complete if Known

Application Number 09/866,067  
Filing Date May 23, 2001  
First Named Inventor Meade et al.  
Group Art Unit Not Yet Assigned  
Examiner Name Not Yet Assigned  
Attorney Docket Number A-58762-20/RFT/RMS/RMK

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## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
SE	78	5,824,473		Meade et al.	10/1998	
	79	5,837,859		Teoule et al.	11/1998	
	80	5,849,486		Heller et al.	12/1998	
	81	5,851,772		Mirzabekov et al.	12/1998	
	82	5,952,172		Meade et al.	9/1999	
	83	6,060,023		Maracas	05/2000	
	84	6,060,327		Keen	05/2000	
	85	6,071,699		Meade et al.	06/2000	
	86	6,087,100		Meade et al.	07/2000	
	87	6,096,273		Kayyem et al.	08/2000	
	88	6,096,825		Garnier	08/2000	
	89	6,107,080		Lennox et al.	08/2000	
	90	6,177,250		Meade et al.	01/2001	
	91	6,180,352		Meade et al.	01/2001	
	92	6,200,761		Meade et al.	03/2001	
	93	6,238,870		Meade et al.	05/2001	
	93a	5,705,346		Okamoto et al.	01/1998	

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>4</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
SE	94	WO	98/57159	A1	Clinical Micro Systems	6/1997		
	95	WO	99/57319	A1	Clinical Micro Systems	11/1999		
	96	WO	99/67425	A2	Clinical Micro Systems	12/1999		
	97	WO	99/14596	A1	AB Sangtec Medical	3/1999		
	98	WO	99/37819	A2	Clinical Micro Systems	07/1999		
	98a	WO	99/29711	A1	Nanogen Inc.	06/1999		

Examiner Signature

S. Zolman

Date Considered

5-17-03

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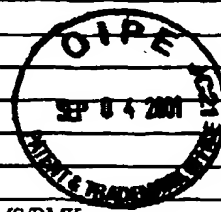
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	09/866,067		
		Filing Date	May 23, 2001		
		First Named Inventor	Meade et al.		
		Group Art Unit	Not Yet Assigned		
		Examiner Name	Not Yet Assigned		
Sheet	5	of	12	Attorney Docket Number	A-58762-20/RFT/RMS/RMK



**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
SE	99	Aizawa et al., "Integrated Molecular Systems for Biosensors," <i>Sensors and Actuators B</i> , B@S (Nos 1/3) Part 1:1-5 (March 1995).	
	100	Albers et al., "Design of Novel Molecular Wires for Realizing Long-Distance Electron Transfer," <i>Biochemistry and Bioenergetics</i> , 42:25-33 (1997).	
	102	Alleman, K.S., et al., "Electrochemical Rectification at a Monolayer-Modified Electrode," <i>J. Phys. Chem.</i> , 100:17050-17058 (1996).	
	103	Arkin et al. "Evidence for Photoelectron Transfer Through DNA Intercalation," <i>J. Inorganic Biochem. Abstracts</i> , 6th International Conference on Bioinorganic Chemistry, 51(1) & (2):526 (1993).	
	104	Barisci et al., "Conducting Polymer Sensors," <i>TRIP</i> , 4(9):307-311 (1996).	
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	108	Biotechnology and Genetics: Genetic Screening Integrated Circuit," <i>The Economist</i> (February 25-March 3, 1995).	
	109	Blonder et al., "Three-dimensional Redox-Active layered Composites of Au-Au, Ag-Ag and Au-Ag Colloids," <i>Chem. Commun.</i> 1393-1394 (1998).	
	110	Boguslavsky, L. et al., "Applications of redox polymers in biosensors," <i>Solid State Ionics</i> , 60:189-197 (1993).	
	111	Boon et al., "Mutation Detection by Electrocatalysis at DNA- Modified Electrodes," <i>Nature Biotechnology</i> , 18: 1096-1100 (October 2000).	
	112	Bowler, B. E., et al., "Long-Range Electron Transfer in Donor (Spacer) Acceptor Molecules and Proteins," <i>Progress in Inorganic Chemistry: Bioinorganic Chemistry</i> , 38:259-322 (1990).	
	113	Brun, A. M., et al., "Photochemistry of Intercalated Quaternary Diazaaromatic Salts," <i>J. Am. Chem. Soc.</i> , 113:8153-8159 (1991).	
	114	Bumm, et al., "Are Single Molecular Wires Conducting?," <i>Science</i> 271:1705-1707 (1996).	
	115	Cantor, C.R. et al., "Report on the Sequencing by Hybridization Workshop," <i>Genomics</i> , 13:1378-1383 (1992).	
	116	Carr et al., "Novel Electrochemical Sensors for Neutral Molecules," <i>Chem. Commun.</i> , 1649-1650 (1997).	
	117	Carter et al., "Voltammetric Studies of the Interaction of Metal Chelates with DNA. 2. Tris-Chelated Complexes of Cobalt(III) and Iron(II) with 10-Phenanthroline and 2,2'-Bipyridine," <i>J. Am. Chem. Soc.</i> , 111:8901-8911 (1989).	

Examiner Signature	S. E. Yomun	Date Considered	5-17-03
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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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of

12

## Complete if Known

Application Number	09/866,067
Filing Date	May 23, 2001
First Named Inventor	Meade et al.
Group Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	A-58762-20/RFT/RMS/RMK

## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
SC	118	Chang, I-Jy, et al., "High-Driving-Force Electron Transfer in Metalloproteins: Intramolecular Oxidation of Ferrocycytochrome c by Ru(2,2'-bpy) <sub>2</sub> (im)(His-33)*," <i>J. Am. Chem. Soc.</i> , 113:7056-7057 (1991).	
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	120	Chidsey, C.E.D., et al., "Free Energy and Temperature Dependence of Electron Transfer at the Metal Electrolyte Interface," <i>Science</i> , 251:919-922 (1991).	
	121	Chrissey, et al., "Covalent attachment of synthetic DNA to self-assembled monolayer films," <i>Nucleic Acids Research</i> , 24(15):3031-3039 (1996).	
	122	Clery, "DNA Goes Electric," <i>Science</i> , 267:1270 (1995).	
	123	<i>Commerce Business Daily Issue of September 26, 1996 PSA#1688.</i>	
	124	Davis, L. M., et al., "Electron Donor Properties of the Antitumour Drug Amsacrine as Studied by Fluorescence Quenching of DNA-Bound	
	125	Davis, L. M., et al., "Elements of biosensor construction," <i>Enzyme Microb. Technol.</i> 17:1030-1035 (1995).	
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		Filing Date	May 23, 2001
		First Named Inventor	Mcade et al.
		Group Art Unit	Not Yet Assigned
		Examiner Name	Not Yet Assigned
Sheet 7	of 12	Attorney Docket Number	A-58762-20/RFT/RMS/RMK

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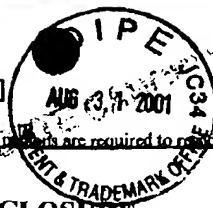
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Application Number	09/866,067
Filing Date	May 23, 2001
First Named Inventor	Meade et al.
Group Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	A-58762-20/RFT/RMS/RMK

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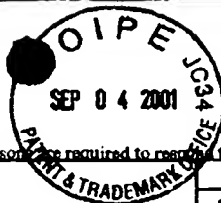
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Filing Date	May 23, 2001
First Named Inventor	Meade et al.
Group Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
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*S. E. Meade*

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